STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

November 18, 2009
Honolulu, Hawaii

Application for a Stream Channel Alteration Permit (SCAP.2454.6)
New Concrete Low Ford Crossing, Makapipi Stream
Nahiku, Maui, TMK: (2) 1-2-001:015

APPLICANT:

Amanda and William Spanko
P.O. Box 6296
Kahului, HI 96733

LANDOWNERS:

Same

SUMMARY OF REQUEST:

Application for a Stream Channel Alteration Permit (SCAP.2410.2) to construct a concrete, low ford crossing across Makapipi Stream in Nahiku, Maui at TMK: (2) 1-2-001:015.

LOCATION: See Exhibit 1.

BACKGROUND:

Makapipi Stream is a perennial stream that is 4.4 miles long with a watershed area of 5.3 square miles. East Maui Irrigation Company (EMI) operates the Koolau Ditch system which runs from east to west and is part of the larger EMI system. The Koolau Ditch is located at the 1,300-foot elevation and diverts most of the stream flow during low flow periods. A USGS stream gaging station is located upstream from the Hana Highway. Makapipi Stream is normally dry in the 0.7 mile reach between the Koolau Ditch and the USGS stream gaging station. Stream flow records from 1932 to 1945 showed no flow during that period indicating that Makapipi Stream is not perennial in that reach of the stream. It is unknown whether the stream is gaining or losing in other sections of the stream. The Division of Aquatic Resources "Atlas of Hawaiian Watersheds & Their Aquatic Resources" identified opae and o'opu in the lower, middle and upper reaches of Makapipi Stream.

ITEM D1

DESCRIPTION:

The applicants propose to construct a new concrete, low ford crossing across Makapipi Stream to provide access to their property and continue the existing road from the west bank to the east bank of their property. The ford crossing will be 12 feet wide, 48 feet long and approximately 6 inches thick. Site preparation and excavation work will be done using a bulldozer, excavator and heavy equipment. Rocks and boulders will be removed to bring the elevation down to and expose the solid bedrock on which the concrete ford crossing will be built. One-half inch rebars will be placed 12 inches deep into the bedrock and be evenly spaced every 24 inches across the concrete ford. Ten-gauge wire mesh with six inch-wide openings will be placed horizontally on top of the bedrock to provide lateral strength. Approximately 10.6 cubic yards of concrete will be poured into temporary wood forms and be treated with a curing agent to speed up the cure time. The stream banks will be graded to provide easy access across the stream. All rubbish and unused material will be removed and disposed of after construction.

ANALYSIS:

The U.S. Army Corps of Engineers commented that a Department of the Army (DA) permit will be required for the discharge (placement) of dredge and/or fill material (concrete, rip rap, backfilling, etc.) into Makapipi Stream, a water of the U.S., and requested additional information to determine the type of DA permit required for the proposed project.

The U.S. Fish and Wildlife Service (U.S. FWS) had no objections to the project and commented that the proposed stream crossing, based on the plans, indicated minimal impacts to the stream bed and banks and did not obstruct stream flow or impede the movement of aquatic species. The U.S. FWS recommended best management practices to avoid and minimize impacts to the aquatic habitat that could result from project construction.

The Department of Health (DOH) Clean Water Branch made the following comments:

- Any project and its potential impacts to State waters must meet the State's anti-degradation policy, designated uses and water quality criteria.
- A National Pollutant Discharge Elimination System (NPDES) Permit may be required for the construction activities.
- A site-specific construction Best Management Practices (BMPs) Plan must be established and properly implemented for the proposed stream crossing, access road construction and all other land disturbance activities related to the project.
- All discharges related to project construction or operation activities must comply with the State's Water Quality Standards.

The Engineering Division made the following comments:

- The project site is located in Flood Zone X and A according to the Flood Insurance Rate Map (FIRM) and that the National Flood Insurance Program (NFIP) does not have any regulations for developments within Flood Zone X but does regulate developments within Zone A.
- The project must comply with the rules and regulations of the NFIP.

The Division of Aquatic Resources commented that:

- The concrete structure should be made lower in relation to the stream bed to allow water to flow over the road during heavy rains.
- A minimal amount of boulders and rocks should be removed from the stream bed, and the stream bed should allow rock and boulders to naturally move downstream.

- The proposed structure may gather boulders on the upstream side of the road crossing and may require occasional maintenance for vehicles to pass safely.

The Land Division commented that permits or easements for the stream crossing are not required because the streambed is privately owned.

The Department of Hawaiian Home Lands and Forestry and Wildlife had no objections to the project.

The University of Hawaii Environmental Center, Maui County Planning Department, Office of Hawaiian Affairs, and Historic Preservation did not submit comments as of the date of preparation of this submittal.

RECOMMENDATION:

That the Commission approve a Stream Channel Alteration Permit (SCAP.2410.2) to construct a concrete, low ford crossing across Makapipi Stream in Nahiku, Maui at TMK: (2) 1-2-001:015 subject to the standard conditions in Exhibit 5.

Respectfully submitted,

KEN C. KAWAHARA, P.E.
Deputy Director

Exhibits:
1. Location Map
2. Site Plan
3. Construction and Section Plan
4. Photos of Stream
5. Standard Stream Channel Alteration Permit Conditions

APPROVED FOR SUBMITTAL

LAURA H. THIELEN
Chairperson

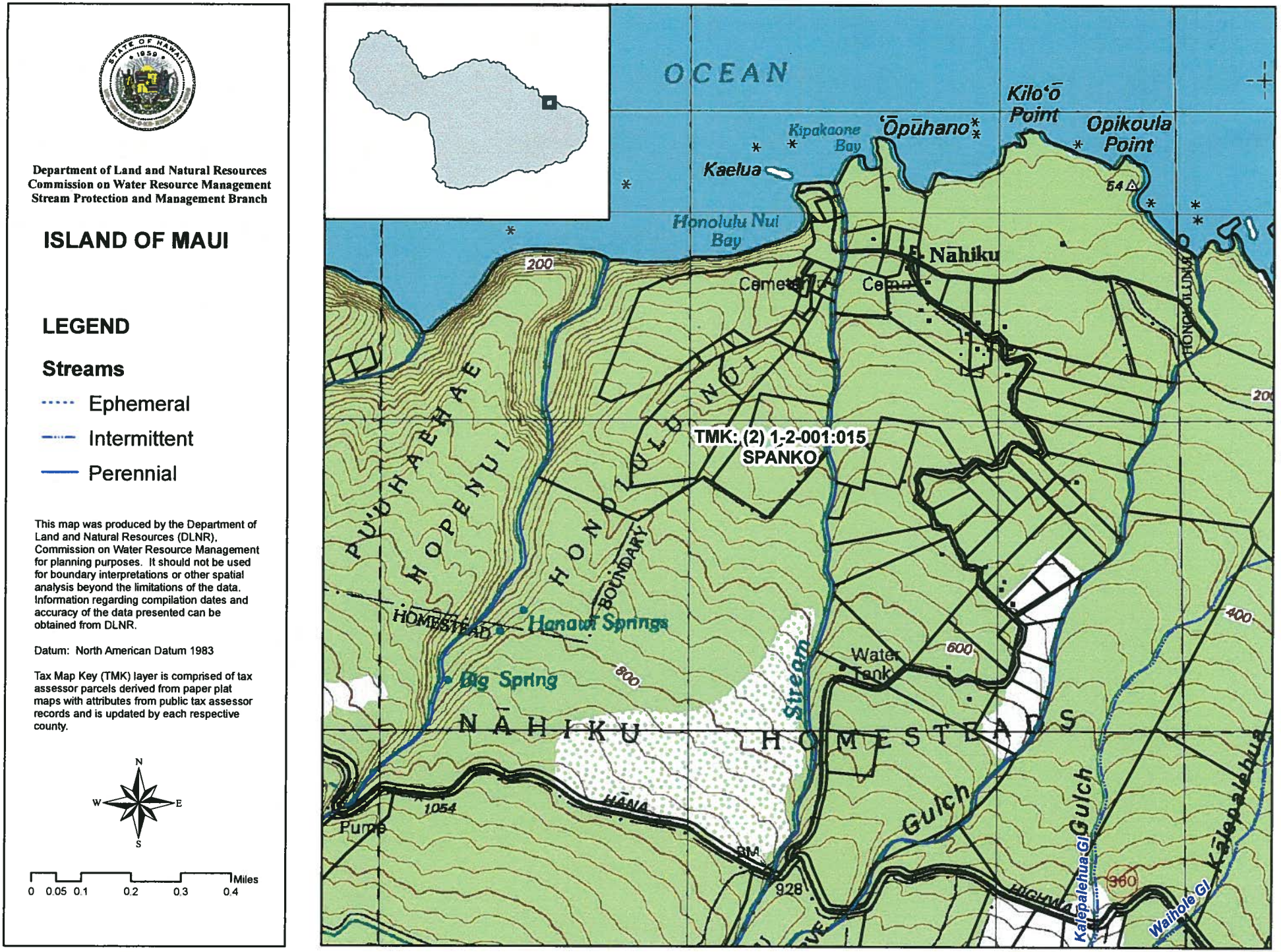
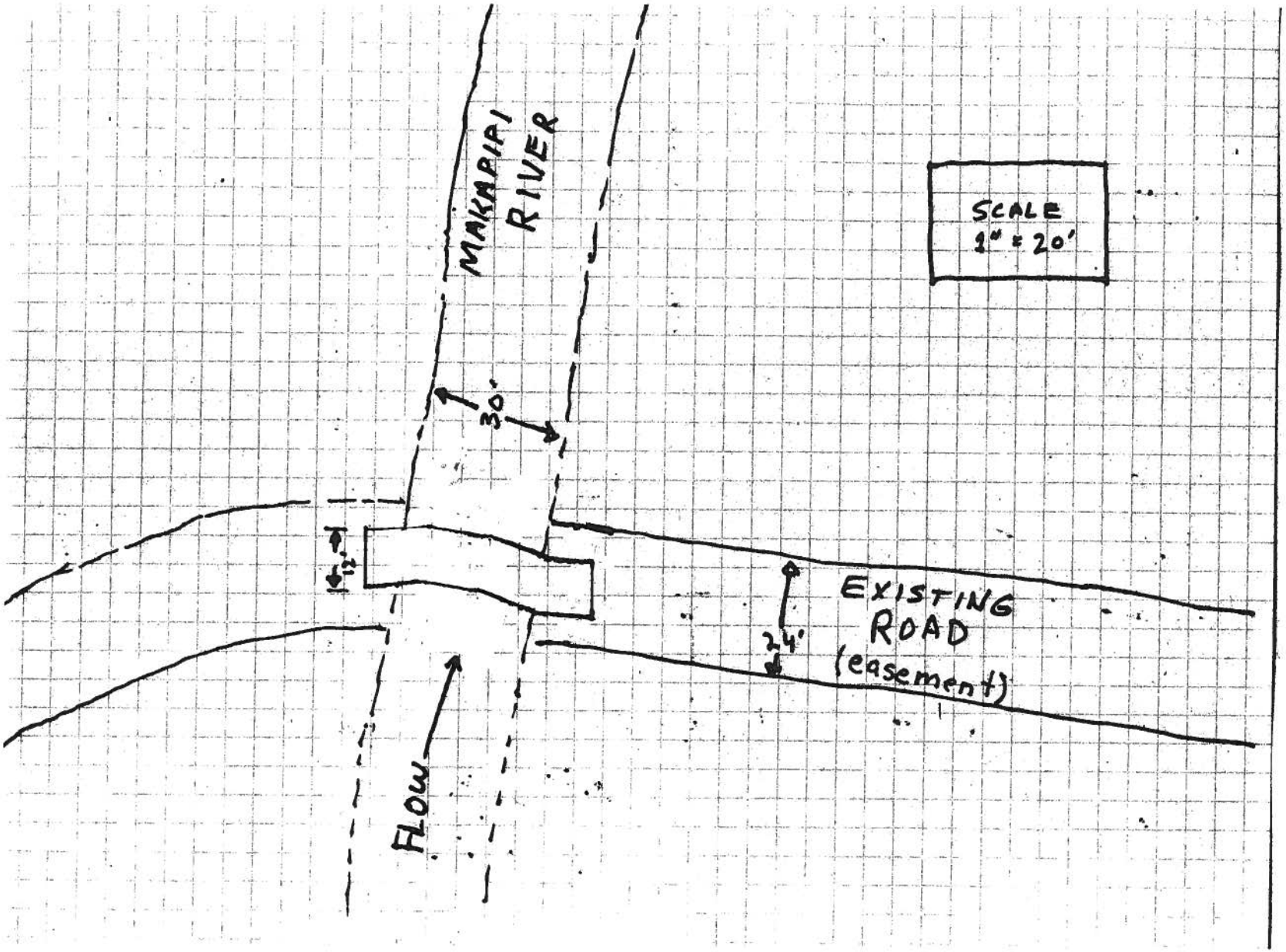

Department of Land and Natural Resources
Commission on Water Resource Management
Stream Protection and Management Branch
ISLAND OF MAUI
LEGEND
Streams
Ephemeral
Intermittent
Perennial
This map was produced by the Department of Land and Natural Resources (DLNR), Commission on Water Resource Management for planning purposes. It should not be used for boundary interpretations or other spatial analysis beyond the limitations of the data. Information regarding compilation dates and accuracy of the data presented can be obtained from DLNR.
Datum: North American Datum 1983
Tax Map Key (TMK) layer is comprised of tax assessor parcels derived from paper plat maps with attributes from public tax assessor records and is updated by each respective county.
N
W
E
S
0 0.05 0.1 0.2 0.3 0.4 Miles
OCEAN
Kilo'ō Point
Opikoula Point
'Ōpūhano
Kipakaone Bay
Kaelua
Honolulu Nui Bay
E. Nāhiku
Cemetery
Cemetery
54
200
TMK: (2) 1-2-001:015
SPANKO
PU'UHAEHAE
HOPENUI
HONOLULU NUI
BOUNDARY
HOMESTEAD
Hanawi Springs
Big Spring
800
600
400
Water Tank
Stream
NĀHIKU
HOMESTEADS
Gulch
HĀNA
1054
Pump
928
360
Kalepalehua Gl
Waihole Gl
Kālepalehua

EXHIBIT 1



Plot Plan

EXHIBIT 2

Scale
1" = 10'

Construction
Plan - Section
View

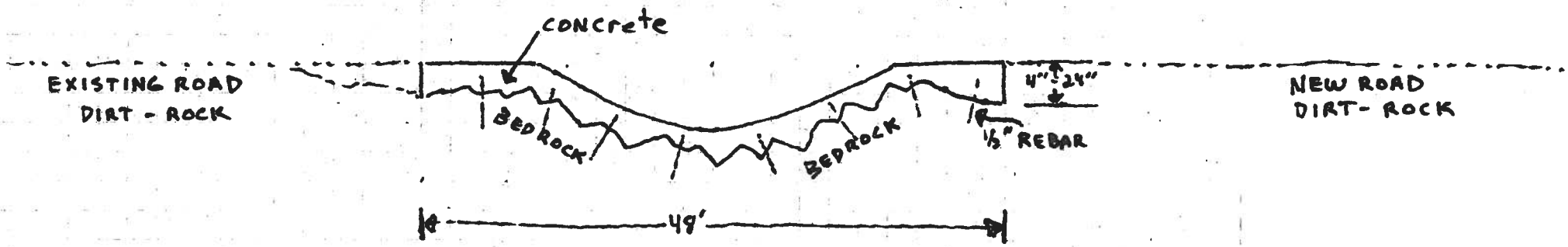


EXHIBIT 3

Looking West twards stream from END of existing road

Looking East at existing road from end of existing road

EXHIBIT 4

East Bank as viewed across stream from West Bank

West Bank as seen across stream from East Bank.

Looking Upstream

Looking Downstream

SPANKO SCAP

STANDARD STREAM CHANNEL ALTERATION PERMIT CONDITIONS
(Revised 9/19/07)

1. The permit application and staff submittal approved by the Commission at its meeting on November 18, 2009, shall be incorporated herein by reference.

2. The applicant shall comply with all other applicable statutes, ordinances, and regulations of the Federal, State and county governments.

3. The applicant, his successors, assigns, officers, employees, contractors, agents, and representatives, shall indemnify, defend, and hold the State of Hawaii harmless from and against any claim or demand for loss, liability, or damage including claims for property damage, personal injury, or death arising out of any act or omission of the applicant or his successors, assigns, officers, employees, contractors, and agents under this permit or related to the granting of this permit.

4 The applicant shall notify the Commission, by letter, of the actual dates of project initiation and completion. The applicant shall submit a set of as-built plans and photos of the completed work to the Commission upon completion of this project. This permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months, unless otherwise specified. The proposed work under this stream channel alteration permit shall be completed within two (2) years from the date of permit approval, unless otherwise specified. The permit may be extended by the Commission upon showing of good cause and good-faith performance. A request to extend the permit shall be submitted to the Commission no later than three (3) months prior to the date the permit expires. If the commencement or completion date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.

5. Before proceeding with any work authorized by the Commission, the applicant shall submit one set of construction plans and specifications to determine consistency with the conditions of the permit and the declarations set forth in the permit application.

6. *The applicant shall develop site-specific, construction best management practices (BMPs) that are designed, implemented, operated, and maintained by the applicant and its contractor to properly isolate and confine construction activities and to contain and prevent any potential pollutant(s) discharges from adversely impacting state waters. BMPs shall control erosion and dust during construction and schedule construction activities during periods of low stream flow.*

7. *The applicant shall protect and preserve the natural character of the stream bank and stream bed to the greatest extent possible. The applicant shall plant or cover lands denuded of vegetation as quickly as possible to prevent erosion and use native plant species common to riparian environments to improve the habitat quality of the stream environment.*

8. In the event that subsurface cultural remains such as artifacts, burials or deposits of shells or charcoal are encountered during excavation work, the applicant shall stop work in the area of the find and contact the Department's Historic Preservation Division immediately. Work may commence only after written concurrence by the State Historic Preservation Division.

EXHIBIT 5